

**Applicant:** Joseph A. Kwak  
**Application No.:** 10/084,043

**REMARKS**

Claims 1-6, and 10 are currently pending in this application. The Examiner has rejected Claims 1-6, and 10. The Applicant has amended claim 1 in the present reply. All claim amendments are fully supported in the specification. No new matter has been added.

**Double Patenting – Obviousness-type**

The Examiner rejected claims 1-6 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. 7,149,192.

The Applicants are willing to submit a terminal disclaimer to overcome the rejections over the claims of U.S. Patent No. 7,149,192, if the Examiner indicates the Application to be otherwise allowable.

**35 U.S.C. §103(a) – Claims 1, 2, 5, 6 and 10**

The Examiner rejected claims 1, 2, 5, 6 and 10 under 35 U.S.C. §103(a) as being unpatentable over Schramm et al. (U.S. Ref. No. 6,208,663) in view of Malkamaki et al. (U.S. Ref. No. 6,735,180) Cheng et al. (U.S. Pub. No. 2002/0191544 A1), and Yonge III et al. (U.S. Ref. No. 6,522,650).

Among other deficiencies in the Schramm, Malkamaki, Cheng, and Yonge references, there is no disclosure, teaching, or suggestion in the Schramm, Malkamaki, Cheng, and Yonge references relating to "adjusting the particular data/modulation using the collected statistics at an adaptive modulation and coding controller; wherein if the collected retransmission statistics indicate a low number of retransmissions, a higher capacity encoding/data modulation scheme is selected as the particular encoding/data modulation and if the collected retransmission

statistics indicate a high number of retransmissions, a lower capacity encoding/data modulation scheme is selected as the particular encoding/data modulation" or "selectively nulling subchannels from an OFDM frequency set wherein the use of a poor quality subchannel is precluded for a predetermined period and adding a previously nulled subchannel back into the OFDM frequency set where a retransmission rate or link quality indicates a high quality for the previously nulled subchannel" as are recited in the Applicant's amended independent claim 1.

Accordingly, the Applicant's amended independent claim 1 is patentable over the Schramm, Malkamaki, Cheng, and Yonge references, whether taken alone or in any combination with one another.

The Applicant's claims 3, 5, 6, and 10 depend from Applicant's patentable independent claim 1, and are therefore patentable for at least the same reason as Applicant's patentable amended independent claim 1.

In addition, the Applicant's dependent claim 10 recites a method "wherein the physical layer ARQ mechanism reduces retransmissions required by the higher layer ARQ mechanism" which is not taught nor suggested in the Schramm, Malkamaki, Cheng, or Yonge references, whether taken alone or in any combination with one another. Therefore, the Applicant's dependent claim 10 is patentable for this reason as well as its dependence from Applicant's patentable amended independent claim 1.

**35 U.S.C. §103(a) – Claim 3**

The Examiner rejected claim 3 under 35 U.S.C. §103(a) as being unpatentable over Schramm in view of Malkamaki, Cheng, and Yonge as applied to claim 1, and further in view of Agee (U.S. Ref. No. 6,128,276).

As stated previously, neither the Schramm, nor the Malkamaki, nor the Cheng, nor the Yonge references disclose, teach or suggest "adjusting the particular data/modulation using the collected statistics at an adaptive modulation and coding controller; wherein if the collected retransmission statistics indicate a low number of retransmissions, a higher capacity encoding/data modulation scheme is selected as the particular encoding/data modulation and if the collected retransmission statistics indicate a high number of retransmissions, a lower capacity encoding/data modulation scheme is selected as the particular encoding/data modulation" or "selectively nulling subchannels from an OFDM frequency set wherein the use of a poor quality subchannel is precluded for a predetermined period and adding a previously nulled subchannel back into the OFDM frequency set where a retransmission rate or link quality indicates a high quality for the previously nulled subchannel" as are recited in the Applicant's amended independent claim 1. Moreover, the Agee reference fails to cure these deficiencies in the Schramm, Malkamaki, Cheng, and Yonge references.

Since claim 3 depends from Applicant's patentable amended independent claim 1, it is patentable for at least the same reason as Applicant's patentable amended independent claim 1.

**35 U.S.C. §103(a) – Claim 4**

The Examiner rejected claim 4 under 35 U.S.C. §103(a) as being unpatentable over Schramm in view of Malkamaki, Cheng, and Yonge as applied to claim 1, and further in view of Birru (U.S. Pub. No. 2002/0037058).

As stated previously, neither the Schramm, nor the Malkamaki, nor the Cheng, nor the Yonge references disclose, teach or suggest "adjusting the particular data/modulation using the collected statistics at an adaptive modulation and coding controller; wherein if the collected retransmission statistics indicate a low number of retransmissions, a higher capacity encoding/data modulation scheme is selected as the particular encoding/data modulation and if the collected retransmission statistics indicate a high number of retransmissions, a lower capacity encoding/data modulation scheme is selected as the particular encoding/data modulation" or "selectively nulling subchannels from an OFDM frequency set wherein the use of a poor quality subchannel is precluded for a predetermined period and adding a previously nulled subchannel back into the OFDM frequency set where a retransmission rate or link quality indicates a high quality for the previously nulled

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subchannel" as are recited in the Applicant's amended independent claim 1. Moreover, the Birru reference fails to cure these deficiencies in the Schramm, Malkamaki, Cheng, and Yonge references.

Accordingly, since claim 4 depends from Applicant's patentable amended independent claim 1, it is patentable for at least the same reason as Applicant's patentable amended independent claim 1.

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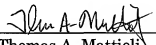
**CONCLUSION**

If the Examiner believes that any additional minor formal matters need to be addressed in order to place this application in condition for allowance, or that a telephone interview will help to materially advance the prosecution of this application, the Examiner is invited to contact the Applicant's undersigned attorney by telephone at the Examiner's convenience.

In view of the foregoing remarks and amendments, the Applicant respectfully submits that the present application, including claims 1, 3-6 and 10, is in condition for allowance and a notice to that effect is respectfully solicited.

Respectfully submitted,

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